A U M

As wave, foam, eddy, bubble are all in reality water, so from the body to the "I," all is consciousness, consciousness is the one pure essence.—CREST JEWEL OF WISDOM.

THEOSOPHY

Vol. XXV September, 1937 No. 11

GENETIC YEARS

DURING recent years a large number of "outline" histories have been published, so that today virtually every field of human endeavor—scientific, religious, philosophical—has had popular historical presentation. While having merit in that they accomplish a degree of adult education, these books are spreading far and wide some quite serious and wholly unsuspected misconceptions. It is necessary, in such works, to reduce complex situations to brief and easy reading. From this it is but a step to the rationalization of history, so that the "progress" recounted seems to develop in logical order from the facts presented. Too often this becomes history the way writers think it "ought to have been," written with little regard for the facts which do not fit into a preconceived pattern. The course of events as thus related is repeated in a thousand ways, in text books, in periodical literature, by lecturers who believe in "simplification," and finally deep-rooted error becomes "established fact."

If readers would turn from the predigested fare of popularizers and hack writers to a few classics written by men of deep insight, it might be realized that cultural progress is largely a matter of intellectual development; that the widely advertised experimental method of science has only beclouded the fact that the significant discoveries announced as original by scientific investigators have been well known for ages. To perceive that the race has now arrived at a point where such discoveries can gain widespread recognition is quite different from believing that Science is disclosing "new truths." If the same degree of study had been given to Buckle's *History of Civilization in England* as to over-simplified outlines, there would be far less misconception as to the origins of modern knowledge. A single passage shows the profound understanding of this writer of the last century:

> Owing to circumstances still unknown there appear from time to time thinkers who devoting their lives to a single purpose are able to anticipate the progress of mankind, and to produce a religion or a philosophy by which important events are eventually brought about. But if we look into history we shall clearly see that, although the origin of a new opinion may be thus due to a single man, the result which the new opinion produces will depend on the condition of the people among whom it is propagated. If either a religion or a philosophy is too much in advance of a nation, it can do no present service, but must bide its time until the minds of men are ripe for its reception. . . . Every science, every creed has had its martyrs. According to the ordinary course of affairs, a few generations pass away, and then there comes a period when these very truths are looked upon as commonplace facts, and a little later there comes another period in which they are declared to be necessary, and even the dullest intellect wonders how they could ever have been denied.

Present-day ideas in regard to evolution illustrate. Except for a few backward religious sects, the fact of evolution as the process of nature is universally believed. Add to Mr. Buckle's analysis the statement in *The Ocean of Theosophy*—

> It is under cyclic law, during a dark period in the history of mind, that the true philosophy disappears for a time, but the same law causes it to reappear as surely as the sun rises and the human mind is present to see it . . . .

and the principle illustrated by the English historian's observations becomes evident. Evolution was well known to the ancients, but their conception of it included the progressive development of an undying intelligence as well as the physical reflection of this process so exhaustively as well as exclusively studied by modern science.

Striking evidence that modern knowledge is but ancient wisdom reborn in new guise is provided by no less an authority than Robert A. Millikan, America's leading physicist:

> Nothing is more surprising to the student brought up in the atmosphere of the scientific thought of the present than the fact that the relatively complex and intricate phenomena of light and electromagnetism had been built together into moderately consistent and satisfactory theories long before the much simpler phenomena of heat and molecular physics had begun to be correctly understood. And yet almost all the qualitative conceptions of the atomic and kinetic theories were developed thousands of years ago. . . .

Democritus' principles, as quoted by Tyndall, are as follows:

1. From nothing comes nothing. Nothing that exists can be destroyed. All changes are due to the combination and separation of molecules.

2. Nothing happens by chance. Every occurrence has its cause from which it follows by necessity.

3. The only existing things are the atoms and empty space; all else is mere opinion.

4. The atoms are infinite in number and infinitely various in forms; they strike together and the lateral motions and whirlings which thus arise are the beginnings of worlds.

5. The varieties of all things depend on the varieties of their atoms, in number, size, and aggregation.

6. The soul consists of fine, smooth, round atoms like those of fire. These are the most mobile of all. They interpenetrate the whole body and in their motions the phenomena of life arise.

These principles with a few modifications and omissions might almost pass muster today. The great advance which has been made in modern times is not so much in the conceptions themselves as in the kind of foundation upon which the conceptions rest. (*Electrons, Plus and Minus,* University of Chicago Press, 1935.)

The "omissions" mentioned by Dr. Millikan are made simply because modern physicists have never considered the possibility of a *causal* relationship between the phenomena of their field of study and the world of metaphysics. Said H.P.B.:

> Modern physics, while borrowing from the ancients their atomic theory, forgot one point, the most important of the doctrine; hence they got only the husks and will never be able to get at the kernel. They left behind, in the adoption of physical atoms, the suggestive fact that from Anaxagoras down to Epicurus, the Roman Lucretius, and finally even to Galileo, all those Philosophers believed more or less in ANIMATED atoms, not in invisible specks of so-called "brute" matter. . . . The idea was metaphysical as well as physical; the hidden interpretation embracing "gods" or souls, in the shape of atoms, as the *causes* of all the *effects* produced on Earth by the *secretions* from the divine bodies. (*S. D.* I, 567-8.)

Manifestly, for Science to return to the conception of *intelligent* forces working in and through matter, as the ancients held, would necessitate a complete revision of both its method and its conception of knowledge. Such a change cannot take place suddenly; the materialism of centuries is not so easily overcome. Indeed, the

gradual impinging of the supersensuous world upon the sphere of physical phenomena, so long thought to be the only reality, has already claimed its victims. Men of high intelligence have been swept into the lunar path of psychism through the doors of experience precocious to the race. The warning of the Upanishad, "Let none awake him who sleeps," has a profound significance for those who seek to arouse the world from the slumber of materialism. The awakening must be gradual, or Hatha Yoga practices and mediumship will claim entire nations and races instead of a few unwary individuals.

Nor can we hope that scientists, however close to Theosophy may come their individual speculations, will ever support the Theosophical Movement as a body. Intuitive workers may and have become recruits; but the whole technique of scientific inquiry is based on *a priori* materialism, hence those scientists who adopt Theosophy must do so as men—*Egos*—and not as disciples of Tyndall, Faraday, Darwin, Huxley and Haeckel. Orthodox scientific thinkers, wrote H.P.B., "will be driven out of their position not by spiritual, theosophical, or any other physical or even mental phenomena, but simply by the enormous *gaps* and *chasms* that open daily and will still be opening before them, as one discovery follows the other, until they are finally knocked off their feet by the ninth wave of simple common sense." (*S. D.* I, 620.)

Historians attribute modern progress to the persevering efforts of great scientists. No one can deny the tremendous and often self-sacrificing labors of these men, but such an explanation is but half the story—the lesser half. Modern science owes its meteoric rise to the invisible workers behind the scenes, who strive for a far higher ideal than personal honor, or even the material prosperity of the race. It is through the work of the *Nirmanakayas* that

> . . . one by one facts and processes in Nature's workshops are permitted to find their way into the exact Sciences, while mysterious help is given to rare individuals in unravelling its arcana. It is at the close of great Cycles, in connection with racial development, that such events generally take place. (*S. D.* I, 612.)

Were a history of the origins of modern civilization to be written from the Theosophic, the occult, point of view, it would trace the major streams of Manasic creativity to individuals either directly or indirectly connected with the Theosophical Movement. The genius of the Renaissance was the genius of the Lodge of Adepts. Truths were "inspired" to Kepler, Leibnitz, Gassendi, Swedenborg

and others, says H.P.B. Galileo studied Pythagorean manuscripts. Platonism, Pythagoreanism and Neoplatonism were reborn in Florence in the sixteenth century. The writings of Boehme influenced Isaac Newton, who was also a student of the Kabala. The Reformation had its real birth with John Reuchlin, great Kabalist and occultist, who was the teacher of Luther, Erasmus and Melancthon. Giordano Bruno dealt fatal blows to medieval scholasticism. His pantheistic doctrines formed a wealth of ideas for Spinoza to draw on. Descartes, also, was much indebted to Bruno. It is now admitted that the principles enunciated by Paracelsus 400 years ago are the basis for modern medical science. Today, Anton Mesmer, long considered a charlatan, stands vindicated by modern psychological research.

The history of our civilization is the story of the gradual penetration of western bigotry and materialism by the ichor of the Wisdom-Religion. Ancient truths are slowly becoming known to the West, under the law stated by Mr. Judge and in the way described by Buckle. Occult philosophy, wrote H.P.B.,

> . . . bestows its important mysteries upon mankind like precious pearls, one by one, far and wide apart and only when forced to do so by the evolutionary tidal wave that carries on humanity slowly, silently, but steadily toward the dawn of Sixth-Race mankind. For once out of the safe custody of their legitimate heirs and keepers, those mysteries cease to be occult; they fall into the public domain and have to run the risk of becoming in the hands of the selfish—of the *Cains* of the human race—curses more often than blessings. (*S. D.* I, 558.)

There is, perhaps, some similitude to this process in the current speculations that the invisible world may be of far greater importance than the realm of physical phenomena. In *Harper's* for June, J. W. N. Sullivan considers the possibility that man has an inner existence which is beyond time and space. While this idea is far from new as a concept of metaphysics, it is somewhat novel to have it proposed as a scientific postulate supported by empirical discovery. Mr. Sullivan traces modern pessimism to the failure of both religious and humanitarian solutions to the problems of life:

> The modern absence of belief in any great and comprehensive purpose in life can be partially ascribed to our increased knowledge. We are now faced, in an unprecedentedly acute form, with the fact that there is a great difference between what we must believe and what we would like to believe. This increased knowledge affects our beliefs both about the future of the universe and about the nature of man himself. It is for the light it

> throws on the old and fundamental question of man's place in the universe that the new knowledge is so profoundly unsettling. All cosmogonies give an answer to that question. Every belief in a purposeful life assumes an answer to that question. And the unsettled state of the modern mind is due to the fact that none of these answers now seems satisfactory. These answers have hitherto been of two kinds, which we may call the theological and the humanitarian. It is primarily our knowledge of the universe that makes us doubtful of the first, and our knowledge of man that makes us doubtful of the second.

The writer proceeds with an analysis of the respective cosmogonies of science and religion, showing that both have a cardinal feature in common:

> They both assume that man is completely conditioned by space and time. What we have called the humanitarian outlook usually supposes that the whole period of man's life belongs to the time period that elapses between his physical birth and his physical death. The whole of his life is manifested within that period. His past, present, and future are terms which apply only to events within that period. Both before and after it he has no existence. The theological outlook also does usually assume, in practice, the complete reality of time. The eternal existence that is promised by it is usually conceived as taking place in a time that goes on forever. Time is considered as an inescapable condition of any form of existence. Man, on this outlook, is freed from the domination of physical death, but not from the domination of time. And another inescapable condition of any form of existence is of course space. The precise location of heaven in space is still a matter of difficulty to believers.

The experimental evidence that man is not a creature of time and space, while more or less valid, seems pitifully puerile to one acquainted with the vast documentation of Theosophical philosophy. Yet to the orthdox scientist, who is far more concerned with the legalistic formulas of his sacred Method than with the testimony of universal history, the authorities quoted by Mr. Sullivan are doubtless of unique value and significance.

Prof. J. B. Rhine, of Duke University, has granted mankind academic freedom from the domination of space by his telepathic experiments demonstrating the fact of extra-sensory perception. Thought-transference is as efficient at 300 miles as at three feet. This, says Mr. Sullivan, is "evidence that there is something in man, some aspect of his consciousness, which is not subject to space."

Time has been dethroned from its rule over human destiny by J. W. Dunne, an English inventor who has put prophetic dreams on a "mass production" basis by working out a careful technique. He has shown that anyone can have prophetic dreams who will take the trouble to follow the directions compiled from a study of his own experiences. Several relatives and friends tried it and succeeded, proving that the faculty is not unique. Why Mr. Dunne's authority is better than that of the great French astronomer, Camille Flammarion, whose monumental work, *The Unknown,* provides far more diverse and interesting material on dreams, visions and other amazing psychic phenomena, Mr. Sullivan fails to say. Perhaps it is because of the notice taken in orthodox circles of the Englishman's researches, while Flammarion was laughed at by his materialistic contemporaries. The latter was but one of hundreds of courageous men, who, when orthodoxy demanded their sacrifice, looked popular prejudice square in the face and went down fighting for their convictions. They lived to "manure the soil of future harmony," in Dostoevsky's phrase.

If a future event can be experienced *now,* the *Harper's* writer argues, it must, in some sense, already exist:

> It cannot be a future event in the same time order in which it is a present event—that would be a contradiction in terms. In the one time order it does not exist; in the other time order it is already existing. . . . As Herman Weyl has put it: events do not happen; we come across them.

Mr. Dunne's experiences are recorded in great detail in his book, *An Experiment with Time.* He found that the essential elements of a future event are often presented in a dream under circumstances superficially suggesting past happenings. He observes:

> Images which are apparently of the past should be submitted to the same severe scrutiny as are those which are apparently of the future, for coincidence will operate just as effectively in either direction.
>
> Computing in this fashion I have found that the images which relate indisputably to the near-by future are about equal in number to those which pertain *similarly indisputably* to the near-by past.

It is quite natural that egoic vision of the future should be "remembered" by the brain in terms of past circumstances and experience. No other medium of comprehension is available to the personal man.

Mr. Sullivan concludes:

> If man's independence of space and time be indeed a genuine

> discovery, then the question of a purpose in life, together with many other questions, acquires a profoundly different significance. . . . His purpose, on this lookout, should have reference to his eternal destiny. . . . The feeling that life is purposeless, from which so many people suffer at the present day, springs primarily from their view of the nature of man and his relation to the universe. Our conceptions of these things, and the feelings based on these conceptions, have hitherto assumed the complete reality of space and time. If we no longer make this assumption the whole question is changed. It becomes, as it were, localized. It applies to man as we know him, but not to man as he is.

This is one of the few serious discussions in modern literature of the idea that the real nature of the human being may be altogether different from the vague and constantly altering conceptions held in scientific and philosophical thought. Mr. Sullivan's entire study is but a preface to his echo of the Delphic oracle: "Man, know thyself."

As fitting colophon to all these considerations, we may recall the closing words of the first chapter of *Isis Unveiled,* a work presented to the public just sixty years ago:

> The moment is more opportune than ever for the review of old philosophies. Archæologists, philologists, astronomers, chemists and physicists are getting nearer and nearer to the point where they will be forced to consider them. Physical science has already reached its limits of exploration; dogmatic theology sees the springs of its inspiration dry. Unless we mistake the signs, the day is approaching when the world will receive the proofs that only ancient religions were in harmony with nature, and ancient science embraced all that can be known. Secrets long kept may be revealed; books long forgotten and arts long time lost may be brought out to light again; papyri and parchments of inestimable importance will turn up in the hands of men who pretend to have unrolled them from mummies, or stumbled upon them in buried crypts; tablets and pillars, whose sculptured revelations will stagger theologians and confound scientists, may yet be excavated and interpreted. Who knows the possibilities of the future? An era of disenchantment and rebuilding will soon begin—nay, has already begun. The cycle has almost run its course; a new one is about to begin, and the future pages of history may contain full evidence, and convey proof that
>
> "If ancestry can be in aught believed,
> Descending spirits have conversed with man,
> And told him secrets of the world unknown."

CAUSE AND DEFECT

COUNTLESS men have in all times sought communion with the invisible—in nature and within themselves. To see and to hear in other worlds of life and being is instinctive in most men, intuitive in a few, an imparted impulse in others. We forget that the animals possess the same five senses as ourselves—and remain animals, because they lack self-consciousness even in the most limited degree.

Because they possess a limited sense of self—a sense restricted to the domain of waking existence in matter, of dream-existence in a world of absorbing illusions—because of this restriction those who consciously see and hear on planes of perception other than these two are few in number. Those who do so perceive include the intoxicated, the delirious, the insane, as well as the medium, the psychic, and the seer.

Are any of these to be trusted, even granting that they "have obtained the use of the inner senses"? The question is of vast importance to theosophists and to others already more or less fascinated by the idea of gaining "occult powers." Turning to the treatise on such sights and sounds, *The Voice of the Silence,* one reads:

> He who would hear the voice of Nada, the "Soundless Sound," *and comprehend it,* he has to learn the nature of Dharana.

Here in this world of waking life where we are most "at home," everyone sees and hears what goes on about him. Is he the wiser and the more trustworthy for all that? How many are there who "see *straight*" and who hear *accurately,* even where they are most interested and intent on doing just that? Which brings one to consider "the nature of Dharana."

Dharana is the giving of our attention *entirely* and *at will* to any chosen subject or object of contemplation. It is self-evident that in order to achieve this, the attention must be wholly withdrawn from any and all other objects, whether of the outer or the inner senses. Is not the plain fact that we are unable so to *focus* our perceptive power, and that when we do, we are absorbed in what we see or hear—the exact opposite of absorbing *it,* which would be to "comprehend" it?

For example, how many of those who have read this brief note saw correctly its title, and heard its implication? How many have cultivated Dharana?

GREAT THEOSOPHISTS

Alchemy and the Alchemists

THE word *Alchemy* is a combination of *Al* and *Chemi—Al,* like the Hebrew *El,* meaning the Mighty Sun, *Chemi* meaning Fire. As *Khem* was the name of ancient Egypt, it is commonly supposed that the science of Alchemy originated in the land of the Pharaohs. But actually it was born on the old continent of Atlantis. Egypt was merely the land of its rebirth.

Donnely says the same

Alchemy is said to have been introduced into Egypt by Hermes Trismegistus. Who was the "Thrice-Great"? The name *Hermes,* like so many other famous names of history, was a generic one common to a long line of Initiates. *Thoth*-Hermes was one of the King-Instructors, the "Sons of the Fire" who incarnated in the Third Race to instruct infant humanity in the arts and sciences. The Egyptians always regarded Thoth-Hermes as a symbol of the Third Race. But in whichever of his characters Hermes appears, he is always credited as the first to teach the science of magic to the Egyptians.

Since "Hermes" implies a Fraternity of Initiates rather than a single individual, the *Books of Hermes* must be considered as a collection of writings and not the work of any one man. In the third century B.C. Manetho mentioned 36,000 manuscripts and Seleucus spoke of 20,000. In the fourth century Iamblicus said that he knew of 1200, forty-two of which he had seen. This Neoplatonist declared that the whole of human knowledge was contained in thirty-six of these books, the other six dealing particularly with the science of medicine. A facsimile of one of these medical treatises of Hermes was acquired by the Astor Library of New York many years ago. The original treatise, known as the Ebers Papyrus, consists of a single scroll of yellow-brown papyrus of the finest quality divided into 110 pages, each of which is carefully numbered. It contains a description of over 700 medicines, many of which are unknown to the physicians of the present day.

The Hermetic philosophy passed from Egypt to Greece about the middle of the seventh century B.C. From that time on the *Books of Hermes* were the text-books of the Greek philosophers and the Egyptian Hermes became the Greek God of Wisdom.

One of the earliest Greek alchemists was Anaxagoras, about whom Norton wrote in his quaint *Ordinall of Alchemy:*

> Anaxagoras wrote plainest of them all
> In his Boke of Conversions Naturall;

Of all the old Fathers that I ever founde,
He most discloses of this Science the grounde.

The Alchemy of Anaxagoras concerned itself with *Cosmic* physics. He taught that Space is filled with a countless number of atoms of infinite variety and divisibility, declaring that the intelligence animating the atoms caused them to aggregate and form the various physical substances. His atomic theory was elaborated by Leucippus and his pupil Democritus of Abdera, who taught that the atoms in space are actuated by *ceaseless* motion which in turn generates *rotatory* motion. It is strange that men who erected the modern science of physics upon the basis of Democritus' atomic theory, as restated by John Dalton, should have overlooked or ignored the fact that Democritus called himself an Alchemist and claimed to have gained all his knowledge from the *Books of Hermes.*

The line of the Hermetic philosophy was continued by Apollonius of Tyana, whose life reveals his knowledge of many of the secret teachings of Hermes. The Neoplatonists drank deep of the wisdom of Egypt, and one of their number—Iamblicus—founded a school for the perpetuation of the Hermetic philosophy. From that time on the Hermetic and Neoplatonic lines of the Theosophical Movement were closely interwoven. In the fourth century the word *Alchemy* appeared in the works of Julius Firmicus Maternus. In the following century Zosimus wrote an encyclopedic work on the subject which is now preserved in the Imperial Library in Paris.

During the fifth and sixth centuries, when the Christian Church had come into complete power, the study of Alchemy was prohibited. It was revived, however, with the Mohammedan invasion, and from then on the number of European Alchemists grew. Some of them, unfortunately, were interested only in the physical side of Alchemy. Others were great philosophers who treated with its inner meaning and used the alchemical symbols to keep the ancient Wisdom-Religion alive in the world. These men toiled for something far greater than fame or worldly wealth. Like Plato, they considered *knowledge* as the only goal worthy of their endeavor. All of them were bound by a single pledge: *to dare, to know, and to keep silent.* The aim of each was the same: *to benefit mankind.* The names of these Alchemists are engraved on the records of the Theosophical Movement in letters of gold, for it was they who kept science and philosophy alive during the Dark Ages and paved the way for H.P.B.

What did *they* understand by *Alchemy?* Would any of them have declared, as our modern dictionaries do, that the object of Alchemy was to transmute base metals into gold? The great Alchemist, Eiranaeus Philalethes, writing in the seventeenth century, says:

> Would to God that all men might become Adepts in our art. For then gold, the great idol of mankind, would lose its value, and we should prize it only for its scientific teaching. (*Open Entrance to the Closed Palace of the King.*)

Let us therefore judge the science of Alchemy by its *real* exponents, not by the quacks and charlatans who degraded the noble art. A true definition of Alchemy was given by Paracelsus 400 years ago: "To grasp the invisible elements; to attract them by their material correspondences; to control, purify and transform them by the living power of the spirit — this is Alchemy." (*Paragranum.*)

This refers to the fact, taught by all true Alchemists and particularly stressed by H.P.B., that nature and man are triune, being composed of a physical body, a soul or indwelling energy, and spirit, which is above the other two. An old alchemical work, published in 1678, says that the art of Alchemy

> . . . is carried to perfection according to the virtue of body, soul and spirit. For the body would never be penetrable were it not for the spirit, nor could these two act upon one another without the soul. For the spirit is an invisible thing, nor could it ever appear without another garment, which garment is the soul. (*Ripley Revived.*)

Of the three constituents of nature and man, the physical body alone is visible. The soul and the spirit are invisible. Alchemy, therefore, is the science which deals with the invisible constituents of nature and man. According to Paracelsus, Alchemy shows men how to attract these invisible elements by their material correspondences. The Hermetic philosophy is based upon the Law of Correspondences, a statement of which was found on the Smaragdine Tablet of Hermes, which opens with the words: "What is below is like that which is above, and what is above is similar to that which is below."

This Law of analogy and correspondence, says H.P.B., is "the guiding law of nature, the only true Ariadne's thread that can lead us through the inextricable paths of her domain toward her primal and final mysteries." In Occult Science, this Law is the first and most important key to Cosmic physics, and is therefore the key

which will unlock the secrets of Alchemy. Under the operation of this Law the whole of nature is seen to be evolving on parallel lines. From gods to men, from worlds to atoms, from the Sun to the vital heat in the lowest organic being, the entire universe is an immense chain, every link of which is joined to the one which precedes and the one which follows. Thus, Alchemy is the science which discloses the correspondences existing throughout the whole of nature.

The medieval Alchemists knew these correspondences and gave out many hints concerning them, without, however, revealing the whole secret. H.P.B. did the same thing, explaining at the same time the reason for her reticence:

> Each principle is correlated to a plane, a planet and a race; and the human principles are, on every plane, correlated to the sevenfold occult forces—those of the higher planes being of tremendous occult power. So that any septenary division at once gives a clue to tremendous occult powers, the abuse of which would cause incalculable evil to humanity. (*The Secret Doctrine* I, xxxv.)

Paracelsus defines Alchemy as the ability to control, purify and transform nature by the living power of the spirit. Although this is the third and last clause in his definition, it is where every student of Alchemy was obliged to begin. Purification was the first step, a process which must start in the man himself. An old alchemical treatise contains this warning:

> Let none set himself up to study Alchemy until, having cleared and purified his heart, he be emptied of all things impure. Let him be charitable, and let him enjoy constant tranquility, so that his mind be lifted up. For, unless it be kindled with the beam of the *divine light,* it will hardly be able to penetrate the mysteries of nature. (*Canons of Espagnet.*)

Purification of the mind and heart is the first step. Self-knowledge is the second. The Alchemist Geber, writing in the eighth century, says: "He who knows not natural principles *in himself* is very remote from the Sacred Science." In that great alchemical work, *Centrum Naturae Concentratum,* it is stated that the highest wisdom possible to man is *self-knowledge.* The student of Alchemy, Alipili says, must apply the art of transmutation to himself, and "then he may go on prosperously and seek with good success the mysteries of all natural things." The Moravian Alchemist Sendivogius spoke of the esteem which all men felt toward the science of Alchemy, "which, *if thou knowest how to know thyself,* thou canst easily comprehend." The subject of the alchemical art is man him-

self, its object the regeneration and ultimate perfection of man, gained through self-knowledge and the recognition of man's unity with the whole of nature.

The medieval Alchemists presented these ideas to the world in the form of symbols. Paracelsus declared that man and the universe are composed of "Three Substances"—Salt, Sulphur and Mercury. Salt referred to the physical form, Sulphur symbolized the inner, energizing principles, while Mercury represented the spiritual essence above the other two. When the medieval Alchemists spoke of the four elements they were really describing the four planes of being—physical, psychic, mental, and spiritual. When they spoke of transmutation they meant the process by which the lower nature of man may be transmuted into the pure gold of the Higher Trinity. Their *Alkahest* was the Higher Self, their *Philosopher's Stone* was Atma-Buddhi-Manas, "a triune, or trinity in nature," as Philalethes expressed it.

The science of Alchemy may be studied under three aspects, the lowest of which is the physical. From this lowest aspect of Alchemy has arisen our modern science of chemistry. How does modern chemistry differ from ancient Alchemy? This question was answered in 1910 by a prominent English chemist, H. Stanley Redgrove:

> If I were asked to contrast Alchemy with the chemical and physical science of the nineteenth century I would say that whereas the latter abounds in a wealth of much accurate detail and much relative truth it lacks philosophical depth and insight; whilst Alchemy was characterized by a greater degree of philosophical depth and insight. For the Alchemists did grasp the fundamental truth of the Cosmos. (*Alchemy, Ancient and Modern.*)

That fundamental truth is that Nature is a *living* organism, every particle of which is animated by the One Life. The Alchemists declared:

> Everything is an expression of the *Principle of Life* in a material form. *The Life is the real thing;* the external form is merely the house in which it resides. (Paracelsus: *De Pestilate.*)

Modern science is rapidly approaching this fundamental proposition of the science of Alchemy, every step forward being a fulfilment of the prediction made fifty years ago by H.P.B., that the science of chemistry would be reborn as the *New Alchemy*. One of the first of these steps was taken a century ago by an eminent Scottish biologist, Robert Brown. While observing the biological movements of microscopic organisms in liquids he noticed that each variety of animalcule had a specific motion, and that tiny particles

of "inert" material such as gamboge, charcoal, etc., showed similar characteristic motions. Theosophical students recognize in the "Brownian Movement" the ceaseless motion of the One Life— the Great Breath— and in the "characteristic" motion the operation of the Law of Karma which "operates on all things and beings from the minutest conceivable atom up to Brahmâ."

In 1927 Prof. Paul Walden, non-resident lecturer at Cornell University, spoke on the subject: "What can the modern chemist learn from old Alchemy?" "Why," he asked, "do we modern chemists and narrow specialists not glean some teachings from these past times?" He accused scientists of losing all connection with nature, telling his listeners that chemistry is no longer a natural science, that it no longer represents a knowledge of *nature as a whole*. He took up the defense of the medieval Alchemists, assuring his listeners that "Alchemy was a Science which included all branches of the technical-chemical industry," and commenting that: "The modern successors of the old Alchemists, the hyper-chemists and Theosophists, could well maintain from their point of view that the transformation or materialization of energy has long been known to them."

H.P.B. spent much of her energy pointing out to the scientists of her day that these things *were* known to the Theosophists, noting that even then Science was "slowly but also surely approaching *our* domains of the Occult." During the fifty years since those words were written, science has come still closer to these domains, but the real nature of matter is still unknown. According to a modern writer:

> The new 20th century entities—electron, proton, neutron, positron—are just as mystifying in their fundamental meaning as the old conception of the atom was. The long path which men of science followed in the chase of the will-of-the wisp called Matter has led them to another ghost—Radiation. If we conquer Radiation we may yet understand Matter. (Jaffe: *Outposts of Science.*)

Perhaps the modern scientists would find the key to the mystery if they followed the advice of the old Alchemists. Dr. Carrel seems inclined to take this point of view. He says that *the science of man will be the science of the future.* Following in the footsteps of Paracelsus, he deplores the fact that man "as a whole" is still not understood, admitting with regret that "scientific investigation has destroyed the world of the soul." A new day will dawn for modern knowledge when scientists seriously consider the three fundamental

propositions of Alchemy, as stated by Trithemius in the sixteenth century:

> The spirit of man is a *Unity,* creating and forming everything, and by acting through the instrumentality of man it may produce wonderful things. Such processes take place according to *Law.* You will learn the Law by which these things are accomplished if you *learn to know yourselves.*

— "IF THOU WOULDST LIVE"

Modern Society is permeated with an increasing cynicism and honeycombed with disgust of life. This is the result of an utter ignorance of the operations of Karma and the nature of Soul-evolution. It is from a mistaken allegiance to the dogmas of a mechanical and largely spurious theory of Evolution, that Pessimism has risen to such undue importance. Once the basis of the Great Law is grasped—and what philosophy can furnish better means for such a grasp and final solution, than the esoteric doctrine of the great Indian Sages—there remains no possible *locus standi* for the recent amendments to the Schopenhauerian system of thought, or the metaphysical subtleties woven by the "philosopher of the Unconscious." The reasonableness of *Conscious* Existence can be proved only by the study of the primeval—now esoteric—philosophy. And it says "there is neither death nor life, for both are illusions; being (or *be-ness*) is the only reality." This paradox was repeated thousands of ages later by one of the greatest physiologists that ever lived. "Life is Death" said Claude Bernard. The organism lives because its parts are ever dying. The survival of the fittest is surely based on this truism. The life of the superior whole requires the death of the inferior, the death of the parts depending on and being subservient to it. And, as life is death, so death is life, and the whole great cycle of lives form but ONE EXISTENCE—*the worst day of which is on our planet.*

He who KNOWS will make the best of it. For there is a dawn for every being, when once freed from illusion and ignorance by Knowledge; and he will at last proclaim in truth *and all Consciousness* to Mahamaya:—

> "BROKEN THY HOUSE IS, AND THE RIDGE-POLE SPLIT!
> DELUSION FASHIONED IT!
> SAFE PASS I THENCE—DELIVERANCE TO OBTAIN." . . .
>
> —H. P. BLAVATSKY.

MAN'S DEBTS TO NATURE

Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay.
—*The Deserted Village.*

EACH civilization, as each generation, presents the same problems, the same successive stages of development in dealing with them, the same course of progression for some, of retrogression for others. From the Golden to the Iron Age, from birth to death, the cycle and cycles roll their rounds of Karma and Reincarnation—of the vast, unending procession and precession in the long pilgrimage of Souls. But few in any civilization, let alone in any given generation of the Iron Age, can be roused, whether from their misery, or from their mirth or their employment, to consider what may be the true nature of the Soul, of its actions or Karma, of the effects of those actions on the Soul itself: its serial rebirths here and in other spheres of life and being.

What we call the forces of nature act in correlations the true basis of which is unknown to us, but nevertheless can be ascertained and availed of to our own good or evil fortune. The chemical elements, as we call them, likewise act under their own laws of affinity and repulsion, laws to whose possible psychic and spiritual importance we are as blind as we are to the forces of nature, even though we benefit or suffer from our contact with and use of these elements. But who has any clear conception that both these basic constituents of manifested nature are as much *Life* as we ourselves are, in evolution as we are, sowers and reapers upon a cosmic, a collective, a supernal impersonal scale of magnitudes beyond our dimensional perceptions of time, space, and causality?

Passing thence to the vegetable and animal worlds, only here do we begin to admit the indwelling presence of psychic in the physical forms of life—Beings which suffer and enjoy, which experience vicissitudes comparable in some degree to our own hazards of existence. But who among men admits, in any spiritual and psychological sense, our relations with and responsibilities toward these foetal, these embryonic Souls—our younger Brothers as yet unquickened by the impact of self-consciousness, of conscience, and of reason?

Yet every man is inescapably aware that his own life, that all human existence, is bound up with and dependent upon the "Four

Elements" of the ancients—Earth, Water, Air, and Fire. Equally is man dependent upon the coexistence of the plant and animal kingdoms. Equally should these latter benefit with us from the mutual intercourse, as equally should the Elements be nourished by us as we are nourished by them. And, again, equally under any balanced concept of cause and effect, of justice, equity, and conduct, no one can doubt that seed as well as sapling, the egg as well as the embryo, the least of beings as the greatest, must be under the same Divine Dispensation.

In any case, whatever one's particular or peculiar views, there is no room for compromise, for quibble, for evasion, whether from the spiritual and moral, the intellectual or practical, the physical, human or personal, conceptions of nature, of nature's law of uniformity operative in all diversity—for no man can doubt that he is a part of nature, governed by its laws and elements, as the part is subject to the whole. Nor can that Principle be avoided on the plea that a part may be so insignificant as to be beneath nature's notice, or so important as to alter nature's schedule to its own convenience. From the minutest conceivable atom up to Brahma or any other God or gods, either there is the reign of Law in every thing and circumstance—or there is not. Who, thus facing the supreme issue, can have one instant's doubt that "rigid Justice rules the world?"

That we are unable and unwilling to observe, to study, to assimilate to ourselves and our conduct this all-inclusive conception of the integrity of nature's law of compensation—this failure of mankind at large must itself be somehow Justice visited upon us. *Why* do we not see, why do we not recognize and admit the sovereignty of Law on every plane, in every world and in every kingdom of nature's vast domains?

The question throws us back upon ourselves, and, however willing or agreeable we are to observe the Dark side of nature and of our fellows, few there be at any time or in any situation, willing to face—themselves. Many there are who idly fancy they would "like to recover the memory of past births"—as if that memory would hold only what is agreeable to behold. These same idlers on the highway of Souls are every day seeking in a thousand ways to drown out the memory of their own painful experiences, in this present existence, the sight and sound of the miseries of their fellows.

The memory of humanity's past existence on this earth stares us in the face on every hand. Every desert waste was once a fertile

inhabited area where the four Kingdoms dwelt together in harmony. Man robbed the soil of its fertility (mark the meaning of the word), played havoc with forest and plant, pillaged and destroyed the animal kingdom, routed the very air of its plastic potency, the water of its hiding places—until at last the Element of fire made fuel of the vital essence in the three kingdoms. In China today, in the vast central plain of the United States, and in other regions in lesser degree, man is robbing the air of its oxygen, the water of its self-cleansing property, earth of its natural responsiveness—even his own body of its inner intelligence. The more our "civilization" progresses, the more mankind in the mass becomes enfeebled, inert, dependent upon artificial means to procure "immunity." Immunity—from what? From Nature and Nature's forces and elements? Or from man's inhumanity to the Life and the Lives of which those Forces and Elements consist?

If thus we deal powerfully, and as irresponsibly as powerfully, with that part of Nature to which we stand in the relation of Elder Brother with his right of primogeniture so heedlessly abused and misused—who could doubt, granting any sort of intelligence in the Kingdoms, their resistance, their inertia, their rebellion against oppression and the oppressor? All literature and legend overflows with memorial echoes of a Golden Age when Man and Nature were in concord, when disease, death, violence, suffering, were unknown. Now we have the Iron Age, with Nature, not man only, at bay. What wonder, "man's inhumanity to man" with such a record of our dealings with Nature?

What irony, what history, what *memory* is engraved in the cant phrase we use when one of us has died: "He has paid his debts to nature." Well—has he? Or has he gone into retreat for a season, as debtors once did in England, trying to hide themselves away from their pressing creditors? When we return to earth once more does not our every experience here cry out to us to take heed of our diseased bodies, our weakened senses, our stunted instincts, our errant impulses, our wayward minds? All these are but combinations of the Lives that we have used and misused.

Turn to collective experiences. Rome conquered the world, reduced whole peoples to slavery, and in so doing wasted away her own citizenry. A thousand peaceful farmers' homes were turned into a single *latifundia* tilled by slaves, and while the noble owner rioted away his substance the former husbandmen turned into sycophants, parasites, subsisting on "bread and circuses" as their

allotment by the dice of destiny. For centuries since, Italy and Europe have wrestled with the impotence of ignorance, superstition, warfare with the Elements and of man with man—their lessons still unlearned, their "debts to nature" still unpaid.

Look, then, upon "natural" calamities, on the explosions of "pent-up Uticas" in the kingdoms of invisible as well as visible Beings—of non-human as well as human inhabitants of this common sphere of life. Are these "acts of God," acts of nature—or acts of man?

Theosophy must needs be studied and applied universally. Every Theosophist can reflect that the "nine gate city of his abode" is his for life-tenancy only. Shall he deal with his house of life as a home, as an arena, as a latifundia, a circus for his amusement and enjoyment, a prison—or as *his* Kingdom of Souls, his subjects who will become his slaves, his parasites, his destroyer, if he does not *pay* his debts to nature by his responsibility for their responsiveness?

ETERNAL GROWTH

Cast into this life, as it were into an alembic, where, after a previous existence which we have forgotten, we are condemned to be remade, renewed, tempered by suffering, by strife, by passion, by doubt, by disease, by death. All these evils we endure for our good, for our purification, and so to speak, to make us perfect. From age to age, from race to race, we accomplish a tardy progress, tardy but certain, an advance of which, in spite of all the sceptics says, the proofs are manifest. If all the imperfections of our being and all the woes of our estate drive at discouraging and terrifying us, on the other hand, all the more noble faculties, which have been bestowed on us that we might seek after perfection, do make for our salvation, and deliver us from fear, misery, and even death. Yea, a divine instinct that always grows in light and in strength helps us to comprehend that nothing in the whole world wholly dies, and that we only vanish from the things that lie about us in our earthly life, to reappear among conditions more favourable to our eternal growth in good. —H. P. BLAVATSKY.

YOUTH-COMPANIONS' FORUM

If Education means a development of man's inner powers, it would seem that methods of teaching should be planned with a view to what these powers are. Theosophy says that man has seven principles, each having its own peculiar functions. Can it be specifically stated how these should be developed?

Man is constituted of seven principles—four mortal instruments and the Real Man. The lower principles are the physical body, the design or astral body, the life force and the desires and passions. The Real Man is a Triad of Spirit, Soul, and Mind. We are this Trinity, which must operate in and through matter in order to gain experience. Our other instruments serve as contacts with the various planes of being. These lower principles are powerless without Spirit-Intelligence to operate and guide them. Therefore, if the plan of evolution is to be fulfilled, the powers of Spirit must be developed while we are here in bodies. If we endeavor to be unselfish and to consider the eternal laws before each action, then we are perfecting our inner powers. We should not seek intellectual development as something independent of the evolution of character.

The only way in which inner powers can be properly developed is through a Theosophical education and in applying the principles thus learned by assuming responsibilities in connection with Theosophical work. The correct way to develop inner powers simultaneously is to control the mind. Control over all the principles results therefrom. *The Bhagavad-Gita* and Patanjali's *Yoga Aphorisms* are guides to harmony within ourselves and with all other beings. The ideas they provide are studied and practiced by Masters of Wisdom and therefore known perfectly by them. We, too, can know them and develop our inner powers if we will but try. This is True Education.

Why is it that in learning something, we seem not to have it mastered until it has become "second nature"—until we can use the knowledge thus acquired "unconsciously" so to say?

"Learning something" implies spiritual as well as intellectual comprehension of a subject, together with its successful application on this plane. Learning without application, like theory without practice, is useless. Mastery requires both, the harmonizing of the physical fact with the mental ideal. The singer thinks of how the song should sound and according to this image his trained vocal

apparatus produces audible tone. The excellence of the rendition depends upon the quality of the "mental ideal" and upon the control the singer has over his instrument.

In any action, Desire is the motivation, Will, the driving or moving force, and Mind the director. Therefore the first step—the most important of all—is to examine the motive or desire. Love of art for art's sake and truth for truth's sake makes great artists and philosophers. But love for truth coupled with a desire to serve humanity makes the true occultist. Why? Because if the motive be pure, altruistic and free from pride, the ideal pattern of action is formed in the ethereal substance of *Buddhi* — the plane of spiritual discernment and the storehouse of absolute wisdom. This *spiritual image* energizes myriads of semi-intelligent forces, "incorporeal spiritual essences" sometimes called thought-elementals. These elementals are without directive capacity of their own. Through the medium of the desires they are attracted to the Thinker who impresses them with the character and intelligence of his thought. The elementals are the "sole agents of action" which influence and direct, via brain and nervous system, the "lives" making up the cells and organs of the body, effecting what we call physical action. The real man performs no action whatsoever on the outer planes. We desire, conceive and will the action; the elementals comprising the various planes of being carry it out. If we think that "we" have performed the physical action we have identified ourselves with our bodies. This shows the tremendous responsibility involved in every human act. For the elementals we have used have the power of affecting those who have in them the seed of a similar desire, arousing their will to a similar action. This is the basis of "rapport"—for good or evil.

Having firmly fixed in our minds the idea of the thing to be learned, the "lives" which compose the faculties or organs involved in the performance of that particular function must be trained. For most, this is a slow task, because we lack sufficient control over our various instruments. But through practice the "lives" acquire facility in the required function—technique. Coördinating the operation of the different degrees of intelligence is another lessson to be learned. Continued practice reduces their several movements to a single complex action. Then we have but to desire, recollect the idea, and will the action, for it to be performed. Finally the action becomes instinctual—"second nature." No doubt the involuntary functions of the body such as breathing, the beating of the heart and digestion were mastered in this manner ages ago. From this

view it is not difficult to understand how the person with trained mind and controlled body is able to do several difficult things at once.

If the motive for learning is personal, the source of our ideas is the lower mind. In this case, while we may speak of spiritual principles, we are unable to comprehend their meaning, grasping instead but the outer material shell of the ideas with our intellects, "for intellect alone is cold, heartless, selfish, because it is not lighted up by the two other principles of *Buddhi* and *Atma*." The fruits of even the most powerful "pure intellect" are lost to the soul upon reincarnation. While the soul may retain the power to rebuild a good intellect in the new body, without the basis of higher motive it can penetrate no further into the mysteries of Nature than her outermost veils. But a well-trained intellect is a useful and powerful faculty of the soul.

All life is a school in which we learn to act as spiritual beings during physical existence. To *master* ourselves is the one great all-inclusive lesson of life.

"Knowledge," writes Mr. Judge in the preface to Patanjali's Yoga Aphorisms, *"implies full identification of the mind, for any length of time, with whatever object or subject it is directed to." Do all the things we learn in school then represent a waste of time?*

The significance of any act lies not in the materials used nor the goal attained, but in the act itself. Whatever good we may derive from the present system of school learning lies in the act of learning, not in the facts so learned. There is no permanent value—measured in terms of experience for the real man—in the accumulated mass of historical and scientific facts which is today called education. But the process of studying those facts can be used as part of the attainment of true knowledge. Without the understanding of how the experience of a school education can be turned to the use of the soul, however, the bare accumulation of facts does indeed represent a waste of time.

In order to get a clear view of the relation and the relative significance of true and false learning, one must take and maintain the position of spirit, which is to recognize that only the unfoldment of the one inner spirit in all forms has reality. In the light of that position, the idea that any thing exists separate and apart from man, as an object of detached study, is clearly false. There is truly but *one life,* of which the man and the objects he studies are no more than outward forms. Only the life within is real; the forms

which we study in school are but "phenomena," transitory and changeable. Such study is little more than the grasping of and retention by the brain of certain evanescent forms and formulas—the outward expression of an inner reality which is not accessible to the microscope nor to the measurements of the metric system.

Clearly, there is no benefit to the soul—which uses a body simply to learn more of its own nature—in the fact that the brain has assembled a descriptive knowledge of certain phenomena, because the brain itself is soon to disintegrate. But there is another power, that of comprehension or discernment, which is not dependent upon the physical brain for its exercise. Through the development of this power a person comes to know not only the form but the essential reality behind the form.

From the basis of one common life a man can learn more, even of mere form, than ever would be possible from the basis of separateness. The man who truly knows an object or another man does so because, taking the position of the soul and putting himself in harmony with the law, he becomes one with the object. He knows all of its qualities and powers because he experiences them in himself.

One learns from textbooks the infallibility of the law of gravity, but the man with true knowledge can free his body from the control of that law at any time—by invoking its opposite. The student of "psychology" in the schools learns that he is a body of desires, moved by conditioned reflexes, animal instincts and "drives." The man with true discernment, knowing that he is not his body, but an immortal soul with various vehicles, "acquires penetration and knowledge of the mental conditions, purposes, and thoughts of others, as well as an accurate comprehension of his own." So state the *Aphorisms* of Patanjali.

Full use of the power of discernment does not come to a man undesired, unworked for. It is the result of training, self-discipline, study, and understanding of oneself. Concentration is the first step in that training. This is the placing of the mind upon an idea or object and being able so to control the mind that all of its various natural tendencies, or "modifications," as Patanjali calls them, are stilled; thus the mind remains fixed upon and absorbed in the object or idea. In developing that concentration, the process of school study may be used as a field of practice.

No necessary performance is a waste of time when our attitude is right and the experience is undergone as one providing food for

the soul. Discipline can be practiced in school study, based on correct principles of psychology. Mr. Judge says, in the *Culture of Concentration*: " . . . not that I think book knowledge is to be avoided, but that sort of acquisition without the concentration is as useless as faith without works." No man can attain to real knowledge, wherein he becomes one with that which he wishes to know, by the thoughtless memorizing of facts and systems of logic. But the man who, as he studies these facts and ideas, can apply his task of concentration, will be turning the experience to real good. Such study, moreover, serves to increase our understanding of the Race Mind, its processes, and the basis of popular misconceptions.

There must be a beginning to the use of the power of discernment. It can be in ourselves as we are now, with our weaknesses and strengths. We need to take cognizance of our powers and learn to use them, to search out our faults and eliminate them. By this means the vehicles we are now using will gradually become perfect and pure channels between worldly experience and the real man. This purification and increased use of all of our principles comes as concentration is persisted in, as "the different inner organs begin to awake, as it were, and to separate themselves from the chains of their bodily counterparts." Then we are on the road to real knowledge, in comparison with which "mere eye-knowledge," as book-learning is called, is as meaningless as the repetition of the alphabet.

"Go To the Ant—"

In relation to its own plane of conception and perception, the ant has as good an intellect as we have ourselves, and a better one. If a scientist could become an ant for a while, and think as an ant, and remember his experience on returning to his own sphere of consciousness, then only would he know something for certain of this interesting insect. As it is, he can only speculate, making inferences from the ant's behaviour.

We are on a higher scale of evolution than the ant, but, comparatively speaking, we are the ants to the plane above.

—H. P. Blavasky in *Transactions*.

TRANSITION AGE

IN order to carry forward the Plan of the Theosophical Movement effectively, it is important that Theosophists know the nature of the age in which they live and work. The present is an age of transition and was recognized as such in advance by the Knowers of Cycles. To the unthinking masses, even to the majority of "intellectuals," the time between 1875, when the Parent Theosophical Society was founded, and 1914, when the World War began, was a period of no unusual significance. Complacent human nature seems incapable of apprehending the approach of impending forces, and to arouse itself only when the direst effects have begun to precipitate on every hand. It took the Great War of 1914 to bring a general realization of the chaotic condition of human society. Periods of destruction are—in the triune process of all growth—followed by periods of reconstruction. The World War indicated to all but the dullest that the old order was passing and a new one in process of birth.

The formation of the League of Nations was intended to inaugurate an era of lasting peace and cooperation among the nations. Yet, in spite of the League of Nations and other well-intended international pacts, the Great War has been followed by an unbroken series of misunderstandings, suspicions, revolts, class struggles, oppressions and depression, all accompanied by renewed preparation for a mighty conflict of arms. Whether Humanity will undergo a yet more drastic purging than that of 1914 we can not say; but one fact is clear—no mere precipitation of Karmic effects can usher in a better age unless the deep-rooted causes of past and present evils are recognized and removed.

Here and there are voices—in the chancelleries of nations and among the leaders in various departments of thought and activity—raised in favor of the principles of human interdependence, national self-determination, international cooperation and other such lofty ideals suggesting Theosophical objectives. Yet the policies of action practically adopted and adhered to are separative, selfish and no different from what they have been in the past. Why?

There is a vast difference between the *philosophy* of Theosophy, pure and simple, and merely Theosophical ideals. Any and all *ideals,* held without knowledge of the spiritual basis whence they derive their power, fail to carry conviction in a scientific age when "reasons" are sought and required. Even men professing such ideals are rarely sure of their ground and in crises they falter, often

abandoning their idealistic programs to fall in line with more "practical" (selfish) policies. They have but poured new wine into old bottles. Theosophical ideals can never be sustained on either sectarian or materialistic grounds. Theosophy *alone* furnishes a scientific basis for ethics and is able to demonstrate the disastrous results of the separative and grasping policies pursued by races and nations. Without a "rational explanation of things," people must and will continue to hug the illusion that it is possible to *force* events and circumstances into a supposedly ideal pattern.

If the voice of Theosophy is to be more than a voice crying in the wilderness—if its mighty power is to penetrate the hearts and minds of the responsible heads of the people—that voice must have ever growing channels of expression all over the world. These channels are Theosophical students of all degrees, and associations of students banded together in fraternal unity on the basis of similarity of aim, purpose and teaching. In her First Message to the American Theosophists, H. P. B. declared:

> The multiplication of local centers should be a foremost consideration in your minds, and each man should strive to be a center of work in himself. When his inner development has reached a certain point, he will naturally draw those with whom he is in contact under the same influence; a nucleus will be formed, round which other people will gather, forming a center from which information and spiritual influence radiate, and towards which higher influences are directed.

Further on in the same Message we read:

> . . . although Theosophical ideas have entered into every development or form which awakening spirituality has assumed, yet Theosophy pure and simple has still a severe battle to fight for recognition . . . But there are others among us who realize intuitively that the recognition of pure Theosophy — the philosophy of the rational explanation of things and not the tenets — is of the most vital importance in the Society, inasmuch as it alone can furnish the beacon-light needed to guide humanity on its true path.

The New Age which will succeed the present period of transition will not be ushered in through any miracle. Mere physical birth is attended by great pain and great sacrifice, and this applies as well to a broad moral regeneration—truly a birth on higher planes. It is only through the unremitting devotion, work, and sacrifice of students of Theosophy that a foundation resting in Spirit will be laid for the generations to succeed ours. And it is only thus that we can keep the link unbroken.

THE MYSTERY OF REGENERATION

QUESTION: When a physical arm is amputated, the astral arm is unharmed. Since the astral arm is the design model for the physical, why doesn't another physical arm grow in place of the amputated member?

Answer: This question generally arises in connection with statements made in *The Ocean of Theosophy* (p. 41) regarding the astral body, in which Mr. Judge discusses teratological phenomena and amputation. The problem derives not alone from the theoretical inference that because the astral body was the basis for the lost limb, it should be able to form a new one, but also from the fact that there are in nature numerous examples of such regeneration. Several of the amphibia can replace lost parts to a high degree. The whole limb of a salamander or a triton will grow again and again after amputation. Many lower marine animals like the hydra have the capacity to reproduce an entire organism from a single transverse section. The Flatworm, cut into nine pieces, will grow into nine normal smaller worms. Crayfish grow new claws, Starfish new rays; Earthworms may be cut into sections and the segments from three different worms grafted together to produce a fourth. Still more familiar is the same power in the vegetable kingdom. Whole plants may be grown from a piece of the root, stem, and in special cases, of the leaf, of certain species. The grafting of fruit trees illustrates this capacity as practically applied by the orchardist.

Why should such regeneration be unique to the lower orders of life? To the theosophist, it is obvious that the explanation lies in an understanding of the astral principle and its changing capacities under cyclic law in man and nature. The question, then, involves the various differentiations of this "formative hand of nature," as determined by the level of intelligence peculiar to each grade of being. As regeneration is a secondary aspect of the creative force in nature, our study should begin with a general consideration of morphogenesis as a universal process.

The evolution of form out of pre-existing material is in every case the result of thought. Forms evolved consciously are the work of an Adept; other men throw them off unconsciously. Adepts do not become involved in their creations because they act as the One Self, never becoming identified with the forms deliberately produced, although using them. The tendency of matter to run to

forms is the reflection of this creative power. The limited creative faculties of man are the result of his partial awareness of inner spiritual powers, now circumscribed by the laws of the phenomenal plane. The entire universe is the result of this power of thought, called *Kriyasakti.* Among the lower forms, we see its operation in Memory of Nature—the endless repetition of creative impulses imparted by higher beings in this and former periods of evolution. Spirit is Life working intelligently—purposively; Matter, the irrational reflection of spiritual processes. The subtler the grade of matter, the more perfectly does it mirror the creative intelligence from which its forms are derived.

A remarkable illustration of the power of thought as manifested in the lower kingdoms appears in *The Theosophist,* February, 1885:

> The fact of an insect assuming the form of a fly is known in Sanskrit as *Bhramarakitanyayam.* This law is known to every school boy in India and abroad. Hindoo boys have very often tried this experiment and succeeded. The process is simple. Make a paper box or a tube; put a bee and a green caterpillar with some tender leaves in the box; and close the box. Then the bee begins its operation. It sits to look steadily into the face of the insect; whenever the latter moves a little, the bee stings it. This punitory discipline, continued for a week or so, creates such terror and fright in the insect that it entirely forgets everything, nay its self existence, but the form of its terrible master—bee; till by the end of nearly a fortnight the insect gradually assumes through this dreadful active meditation and devotion the very form of the bee with wings; and flies off as a bee when the lid is opened. This is both practically and scientifically true. This explains also the law of Affinity or Molecular attraction or Integration of homogeneous particles and the molecular repulsion or disintegration of heterogeneous ones.

If all the powers of nature are present in man, some now active, others latent, it follows that he could, *if he knew how,* replace a lost limb. But were this possible as a conscious act to present humanity, would we be living on the physical plane? Manifestly, such a direct use of Kriyasakti would involve knowledge of what Mr. Judge calls the "inner chemical and dynamic laws of Nature." And if the phenomenal plane of existence is wholly the result of man's thinking of it as reality, such knowledge as a common possession would dissolve what we think of as "matter" into thin air.

Not only does man contain all the powers of nature, but the same lower forms which exhibit the "regeneration" now lost to him are veritably *his own creation.* The teachings on physical evolution given in *The Secret Doctrine* are the practical key to the problem. Note that "regeneration" of the kind suggested is no more possible to the mammals than to humans, and then consider the respective origins of the mammalians and the amphibia and other lower forms:

> So far as our present *Fourth Round* terrestrial period is concerned, the mammalian fauna are alone to be regarded as traceable to prototypes shed by Man. The amphibia, birds, reptiles, fishes, etc., are the resultants of the Third Round, astral fossil forms . . . projected into physical objectivity subsequent to the deposition of the first Laurentian rocks. (II, 684.)

But—

> . . . the *Third Round* terrestrial animal forms were just as much referable to types thrown off by Third Round man, as that new importation into our planet's area—the mammalian stock—is to the Fourth Round Humanity of the Second Root-Race. (II, 685.)

It appears, therefore, that the forms of life possessing the power of regeneration belong to the third Round. They should, in this case, typify or express in reflected form the capacities of their creators during that period. We have before us in all the vast variety of natural life an objective record of the successive steps in the evolution of form which ended with the present type of humanity. As *creative* intelligence is lacking in the lower kingdoms, these forms are literally *living images* of our own past, each species exemplifying a rung in the ladder of human phylogeny. Thus, to explain the evolution of the human body H.P.B. directs our attention to the lower forms: " . . . the *progressive* order of the methods of reproduction, as unveiled by science, is a brilliant confirmation of esoteric Ethnology." (II, 166.)

What was the nature of third Round evolution, which produced the types of the organisms which can now regenerate lost parts? The teaching is that each round develops an element, in the following succession: Fire, Air, Water, Earth. Here Water, suggests H.P.B., was not that element as we know it, but was "that primordial fluid which was required, according to Moses, to make a *living soul* with." (I, 254.) This, as well as numerous other statements, indicates the *astral* character of third Round evolution. H.P.B. speaks of the "cast-off clothes" of man which determined

the shape of all the lower forms as "the prototypes which man *shed* in the course of his astral development." (II, 684.)

We might consider next some statements regarding astral substance. The Earth was at one time semi-astral, or "viscid": "The word 'astral' does not necessarily mean as thin as smoke, in occult phraseology, but rather "starry,' shining or pellucid, in various and numerous degrees, from a quite filmy to a viscid state. . . ." (II, 251.) In writing of the relation between the third Round astral prototypes and the origination of pre-mammalian species in this Round, H.P.B. remarks, " . . . there are precise domains wherein the astral merges into physical evolution." (II, 257.)

The foregoing should be sufficient basis for the citation of some recent scientific discoveries in the field of morphogenesis. In modern biology, two kinds of cells are recognized, germ cells and somatic cells. The germ cells, according to Weissmann, contain the memory-pattern of the entire organism. Somatic cells, on the other hand, can reproduce only themselves. The characteristic feature of regeneration in mammals is that lost cells are only replaced from cells of the same morphological order. The somatic tissue of the lower animals, however, has the power to form a complete organism, including the reproductive organs and new germ cells. This, as is pointed out by L. L. Woodruff in *Foundations of Biology,* indicates that we must postulate at least a potential supply of the germ residing in the somatic tissue. . . ." But where does the germ cell obtain the pattern of the whole organism? Chemical analysis of the chromosomes of germ cells has revealed an amazing lack of variety in their constituents. If chromosomes are the bearers of tiny particles called genes, and if the latter are physical entities containing the hereditary characters of the future organism, we might expect them to have a highly complex chemical structure. Yet, in *General Cytology* (Cowdry, University of Chicago Press) A. P. Matthews writes, "it is very improbable that were the chromosomes constituted of widely different genes they would show so simple and definite a composition." There can be but one conclusion: *The morphological plan is written in a subtler substance than visible physical matter.* This is the astral body. In the lower forms, however, the organic memory of the astral matrix pervades in latency the entire form, as must be the case if a small piece of a worm can reconstruct the complicated system of tissues and organs of its species. Such a capacity indicates that the morphogenetic process during the third Round was quite different from the prevailing order of the fourth. The unfolding of the astral pattern is

now limited to the specialized agency of the germ cell, in the case of those forms peculiar to fourth Round evolution.

In other words, the present *lowest* forms are *nearest* third Round conditions. Thus, worms, insects, etc., consist in large part of germ plasm, while in man and mammal somatic cells enormously preponderate. This may be regarded as a physical explanation of the problem. Add to this the psychological factor: the imagination of man which dwells on the injury, and we can well see how the astral member might soon wither away. If thought can generate organic lesions, as is now admitted by medical science, who can deny that the same power reversed might work equal wonders on the side of reconstruction? One who has consulted the remarkable cures accomplished at Lourdes is justified in believing such regeneration well within the power of the man of Will and Yoga.

Recent biological experiments throw a new light on the protean functions of the astral body. Dr. Oscar Schotté of Amherst considers the possibility "of every cell in a body becoming the seed of a whole new individual." (New York *Herald-Tribune,* April 27.) He cut small sections from the eggs of newts, salamanders and frogs and planted these "seeds" in the fast-growing tissue of parts being regenerated by adult animals of the same species. We quote a description of the result:

> Planting them in the regenerating tail was like letting them steal a biological hitch hike in order to ride to maturity. The seed acted like hitch hikers, who once taken aboard the car, robbed their host. The seed took over control of the rapidly growing tail tissue and instead of letting it grow into a tail they fashioned it into a new head—if the seed was cut from that part of the egg. The animal thus became possessed of two heads, one at each end of its body.

In another such experiment Dr. Schotté used as a "seed" or "organizer" that portion of the egg destined to grow into an eye. According to the experimenter:

> The eye cups implanted in the midst of the regenerating mesenchyme not only induced the neighboring tissues to differentiate into physical lenses, but also induced in every step a complete redifferentiation of the surrounding cells, preceded by intense proliferation. . . .
>
> The unraveling of the whole process is characterized by a continuous supply of new cellular material added to the blastema by proliferation. If an organizer such as the eye cup be implanted in these shifting masses of cells, an eye field is organized which spread with the material. By some unknown

> process the eye field must exert its influence beyond its proper limits and the materials constituting the borders of the eye field in turn become organizers for far more remote organs such as an ear, a nose, a mouth.
>
> The probable explanation of this induced growth process and of the induction of embryonic organs is that the transplanted eye cup induces an "eye field" which, with time, spreads and becomes an "upper head field," thereby inducing the formation of an ear vesicle. These diverse fields complete each other and eventually a "lower head field" is created.

Curiosities of this kind can occur without the aid of vivisection. In certain rare cases among insects a leg may be replaced by a wing. Some lizards may have more than one tail. When one is injured but not disconnected, another may grow, and lizards with three tails have been observed. The additional appendages, however, do not contain true vertebrae. (*Herald-Tribune,* March 8, 1936.) Whence these "mistakes" of Nature? Reflection on some statements made by H.P.B. (*S. D.* I, 277-80) should help clear up this problem for the student.

Truly the formative potencies covered by the Theosophical term, "Astral," are well nigh infinite in extent. This is sensed in modern biology by a growing realization of the complexity of protoplasm, which might be regarded as a precipitation of astral matter on this plane. The distribution of the astral "fields" or axes of growth throughout the body of the lower animals—in every cell in all those forms which reproduce by simple fission—shows above all the *hierarchical* nature of the primitive orders of life. Because on this, the plane of illusion, they present the appearance of individuality, is no reason to conclude that they are discrete entities on the plane of intelligence.

At our present stage of human evolution we can only reason and speculate about the precise nature of the laws governing these mysteries, taking for our guide Analogy and Correspondence. When as a race we return to the primeval condition of Will-born beings, with bodies of the order described in the article, "The Elixir of Life," then all the enigmas of morphogenesis will dissolve in the fire of spiritual knowledge.

VACCINATION

By Herbert Spencer

[THEOSOPHY reprints herewith a brief essay by Herbert Spencer. The text is copied from his last published work, *Facts and Comments,* originally issued in 1902.

The passage of time has served to emphasize the questions raised by the great English philosopher. Although compulsory vaccination still obtains in many quarters, and although laymen, even more than the medical fraternity, are avid for serumization against many other diseases—still there is evident a rising tide of protest and even of alarm over the ascertained and suspected sequential dangers and damages from this source. The "miracle notion," once confined exclusively to theological and popular religion, has spread far and wide under other names into other fields—nowhere more injuriously than in the vast domain of medicine.

Theosophists should find in Mr. Spencer's essay not only material for their own thought and use, but a model of dispassionate consideration and utterance on moot and disputed subjects.—Editors.]

WHEN once you interfere with the order of Nature there is no knowing where the results will end," was the remark made in my presence by a distinguished biologist. There immediately escaped from him an expression of vexation at his lack of reticence, for he saw the various uses I might make of the admission.

Jenner and his disciples have assumed that when the vaccine virus has passed through a patient's system he is safe, or comparatively safe, against small-pox, and that there the matter ends. I will not here say anything for or against this assumption.[1] I merely propose to show that there the matter does *not* end. The interference with the order of Nature has various sequences other than that counted upon. Some have been made known.

A Parliamentary Return issued in 1880 (No. 392) shows that comparing the quinquennial periods 1847-1851 and 1874-1878 there was in the latter a diminution in the deaths from all causes of infants under one year old of 6,600 per million births per annum;

[1]Except, indeed by quoting the statement of a well-known man, Mr. Kegan Paul the publisher, respecting his own experience. In his *Memories* (pp. 260-1) he says, respecting his small-pox when adult, "I had had small-pox when a child, in spite of vacccination, and had been vaccinated but a short time before. I am the third of my own immediate family who have had small-pox twice, and with whom vaccination has always taken."

while the mortality caused by eight specified diseases, either directly communicable or exacerbated by the effects of vaccination, increased from 20,524 to 41,353 per million births per annum—more than double. It is clear that far more were killed by these other diseases than were saved from small-pox.[2]

To the communication of diseases thus demonstrated, must be added accompanying effects. It is held that the immunity produced by vaccination implies some change in the components of the body: a necessary assumption. But now if the substances composing the body, solid or liquid or both, have been so modified as to leave them no longer liable to small-pox, is the modification otherwise inoperative? Will any one dare to say that it produces no further effect than that of shielding the patient from a particular disease? You cannot change the constitution in relation to one invading agent and leave it unchanged in regard to all other invading agents. What must the change be? There are cases of unhealthy persons in whom a serious disease, as typhoid fever, is followed by improved health. But these are not normal cases; if they were, a healthy person would become more healthy by having a succession of diseases. Hence, as a constitution modified by vaccination is not made more able to resist perturbing influences in general, it must be made less able. Heat and cold and wet and atmospheric changes tend ever to disturb the balance, as do also various foods, excessive exertion, mental strain. We have no means of measuring alterations in resisting power, and hence they commonly pass unremarked. There are, however, evidences of a general relative debility. Measles is a severer disease than it used to be, and deaths from it are very numerous. Influenza yields proof. Sixty years ago, when at long intervals an epidemic occurred, it seized but few, was not severe, and left no serious *sequelae*; now it is permanently established, affects multitudes in extreme forms, and often leaves damaged constitutions. The disease is the same, but there is less ability to withstand it.

There are other significant facts. It is a familiar biological truth that the organs of sense and the teeth arise out of the dermal layer of the embryo. Hence abnormalities affect all of them: blue-eyed

[2]This was in the days of arm-to-arm vaccination, when medical men were certain that other diseases (syphilis, for instance) could not be communicated through the vaccine virus. Any one who looks into the Transactions of the Epidemiological Society of some thirty years ago, will find that they were suddenly convinced to the contrary by a dreadful case of wholesale syphilization. In these days of calf-lymph vaccination such dangers are excluded: not that of bovine tuberculosis, however. But I name the fact as showing what amount of faith is to be placed in medical opinion.

cats are deaf and hairless dogs have imperfect teeth. (*Origin of Species*, Chap. I.) The like holds of constitutional abnormalities caused by disease. Syphilis in its earlier stages is a skin-disease. When it is inherited the effects are malformation of teeth and in later years iritis (inflammation of the iris). Kindred relations hold with other skin-diseases: instance the fact that scarlet fever is often accompanied by loosening of the teeth, and the fact that with measles often go disorders, sometimes temporary, sometimes permanent, of both eyes and ears. May it not be thus with another skin-disease—that which vaccination gives? If so, we have an explanation of the frightful degeneracy of teeth among young people in recent times; and we need not wonder at the prevalence of weak and defective eyes among them. Be these suggestions true or not, one thing is certain: —the assumption that vaccination changes the constitution in relation to small-pox and does not otherwise change it is sheer folly.[3]

[3]A high authority, Sir James Paget, in his Lectures (4th ed. p. 39) says:—"After the vaccine and other infectious or inoculable diseases, it is, most probably, not the tissues alone, but the blood as much or more than they, in which the altered state is maintained; and in many cases it would seem that, whatever materials are added to the blood, the stamp once impressed by one of the specific diseases is retained." Here is a distinct admission, or rather assertion, that the constitution is changed. Is it changed for the better? If not, it must be changed for the worse.

THE FINAL AUTHORITY

Experience is not at fault; it is only our judgment that is in error in promising itself from experience things which are not within her power.

Wrongly do men cry out against experience and with bitter reproaches accuse her of deceitfulness. Let experience alone, and rather turn your complaints against your own ignorance, which causes you to be so carried away by your vain and insensate desires as to expect from experience things which are not within her power!

Wrongly do men cry out against innocent experience, accusing her often of deceit and lying demonstrations!

—LEONARDO DA VINCI.

ON THE LOOKOUT

"Schools of Crime"

American prisons and reformatories are thus characterized by James V. Bennett, Federal director of prisons. (Los Angeles *Times,* Aug. 3.) Each year 80,000 men and women leave these institutions with a "sound basic training in the anti-social sciences." Appealing for an intelligently administered system of parole and probation, he points out that "The nation's prisons and reformatories graduate a number almost precisely equal to the list of young men and women who receive college and university diplomas each year." This official feels that larger state appropriations for parole supervision should be made, observing that "the aim of the prison system is to rehabilitate, not merely to punish offenders."

But is it possible to reduce crime by "rehabilitating" the criminals we catch? What about the offenders still at large—who in all probability are the great majority?

No "Criminal Type"

Observation of the criminals passing through the Court of General Sessions in New York City has brought Dr. Charles B. Thompson, in charge of a psychiatric clinic in connection with the court, to the conviction that the offenders are not "criminal types" but possess the same biological and mental characteristics as the rest of the population. (New York *Herald-Tribune,* May 11.) He sees no possible relief through present legal and correctional procedure, regarding crime as a result of the egocentric philosophy common to society at large. The cure, he says, is to be found in a cure for the selfishness that is rampant throughout the community. Discussing the problem, Dr. Thompson develops a theory of moral conduct founded on the axioms of Theosophy. In his opinion the motives for human action in every case spring from the *idea of self.* He discovered by analysis of thousands of prisoners that crime proceeds *automatically* from an extreme sense of separateness. We quote his discussion of the problem:

> Our responsibility is to reckon broadly with those factors that determine anti-social trends throughout society of which the behavior pattern of the recidivist is but one aspect.
>
> In this problem of the repeater criminal, that has long puzzled the best of our students, lies a direct challenge to our

civilization. The reactions common to the criminal are reactions that are common to mankind generally. In the behavior of the recidivist this observation is equally pertinent. We are confronted not so much by a problem that is isolated in the behavior of a few individuals as by a condition that exists throughout the race of man. Accordingly in our need for a broader approach to our problem we must establish a basis of observation that will encompass the generic factors that lead to anti-social behavior in mankind.

THE SEPARATIVE "I"

In the early period of his life each of us as individuals is conditioned to react with a special affective content to the stimulus of the word "you" or, as he himself feels it, "I," and the picture or image denoted by this word comes to have more importance than everything and every one else in the world.

That which is "good" is to the advantage of this "I" and is to be sought, and that which is bad is to the disadvantage of the "I" and is to be avoided. . . . Each one becomes so conditioned that his thought automatically is, "How will what is going on in this moment cause me gain or loss?"

By virtue of the image of himself, which is thus secondarily acquired by the individual, and which differentiates him from all others of his kind, an over-emphasis has been placed upon the individual and he has in turn been given an exaggerated sense of his own importance.

It is sufficient for our purposes in the moment that this conditioned separative "I" image represents a common denominator for the compulsive egocentric acquisitiveness of man throughout the species, including the reaction of the criminals as well as the non-criminals. Getting for one's self at the expense of others is both civilization's outstanding characteristic and its fundamental anomaly.

CRIME—A BEHAVIOR PATTERN

Our studies in the psychiatric clinic of the Court of Special Sessions show that pathological cases among all our prisoners for the first four years, namely, 9,256, are less than 9 per cent, and indicate that a repetition of crime proceeds from a certain automatic behavior pattern or set-up in the individual organism which will react whenever the appropriate and familiar stimuli are encountered.

From the viewpoint of diagnosis, Dr. Thompson's analysis of the cause of crime is accurate and conclusive. From the viewpoint

of Theosophy, the treatment is obvious: The dissemination of the fundamental principles of Theosophy to bring about a truer *realization of the Self,* a profounder *conviction of Universal Brotherhood.* Only this, to adopt the psychiatric jargon, can establish the "behavior patterns" of consideration for others, unselfishness and tolerance that will "react" whenever the all too familiar "stimuli" of suffering, want, and human weakness present themselves.

Money Isn't Everything!

Surveying "G. G." (goodness of life for good people), that inveterate surveyor, Prof. Edward L. Thorndike of Teachers College, Columbia, finds that "character" is its most important ingredient. Again the mountain of modern science hath travailed, and brought forth a mouse (New York *Times,* May 2):

> Measurements were made in 117 cities to set up scales by evaluating such matters as infant death-rates, salaries paid to teachers, number of families that paid less than $10 a month for rent, number of houses with gas, electricity, telephone, and the amount of parking space per inhabitant. Scores to the number of twenty-three were tabulated.
>
> The differences of the 117 cities were also studied in relation to per capita taxable wealth to per capita private income and personal qualities and behavior of the population as indicated by owning homes, letting children graduate from high school instead of making them earn their own livings, keeping physicians and nurses busy, paying servants to do the housework instead of letting mother do it.
>
> Casting a critical eye over his tables and scores, Dr. Thorndike reaches the conclusion that G. G. is not necessarily purchasable. Only thirty-three per cent of the variation of cities in G. G. was accounted for by wealth and income and sixty per cent by the personal qualities and behavior of its people or by what we commonly call "character."

The Modern Plague

The causes of cancer remain as much a mystery today as they were in ages past. Statistics showing the alarming increase of this disease are provided by the first issue of *The Digest* (July 17):

> In 1900, this modern plague killed 63 per 100,000 of population—tenth on the mortality list. Now the yearly toll has leaped higher than 107 per 100,000—second only to that of the diseases of the heart and blood vessels. This year, in the U. S. alone, 150,000 persons will die of cancer. And experts are pre-

dicting that its mortality will not become stationary until after a further rise of 50 per cent—attained probably by 1987. Cancer research lags behind research in other fields of medicine.

LOCAL OR SYSTEMIC?

The prevailing theory about cancer is that it is a local disease. Everyone is familiar with the repeated assertions by medical authorities that only local treatment, by radium or surgery, can benefit the cancer sufferer. This was denied some years ago by Dr. Robert Bell, head of the Cancer Research Department of Battersea Hospital, England. In his opinion it is a blood disease:

> With reference to the treatment of cancer by local methods, it beats me to comprehend for a moment how one can expect to cure a blood disease—which cancer undoubtedly is—by attacking its local manifestation, and leaving the source of the trouble to take care of itself without making any effort to improve the quality of the blood-stream. For depend upon it, every cell of the body is affected, and has been affected for a long period prior to the appearance of the local outcrop. . . . In my view, cancer is the outcome of prolonged toxemia, and a vitiated blood supply affecting the nervous system and the efficiency of the endocrine glands explains the absence of healthy cell-metabolism and the dire disturbance we call cancer. (N. Y. *Medical Record,* March 18, 1922.)

A RECENT CONCLUSION

Dr. Bell's convictions are supported by later research. A writer in the New York *Times* of Aug. 16, 1936, describes experiments showing that there is a difference between the normal and the cancerous blood of rats. In cancerous blood the distribution of the proteins is altered. The writer remarks:

> . . . here we have evidence that cancer is not a localized disease even in the beginning, but a systemic disease of which the first manifestations are local.
>
> If cancer is systemic in nature it follows that the present methods of treating or removing tumors can be of only local benefit. This conclusion is borne out by the statistical studies of Dr. Frederick L. Hoffman. He finds that neither surgery nor radiation accounts for more than about 5 per cent of the "cures."
>
> . . . Tumorous cells have a different chemical action (chemical metabolism) from normal cells. Possibly a way may be found to alter this chemical action—to bring it back to normal.

> If so, the cancer cells would lose their quality of dividing for reproduction and hence their capacity for taking possession of the tissues that they invade.

"Balance of the Organism"

Other investigations have shown that a slight alteration in the bile acids in the body can cause them to become carcinogenic agents —cancer producers. (Washington *Herald,* March 1.) Experiments along this line performed by Dr. Carl Voegtlin, chief of cancer research at the National Institute of Health, move him to say:

> This may mean that cancer is caused by an upset, a malfunctioning of the metabolism of the body—the whole process whereby food is consumed and converted into energy so that we can function. When this delicate balance of the whole organism is altered, certain acids, manufactured within the body, may be changed into carcinogenic agents.
>
> In our laboratory we have found that by diminishing certain amino acids (closely related to proteins) in the body of an infected animal, we can measurably inhibit the growth of these tumors. If we increase the acids, the cancer is enlarged.

Work of the "Destroyers"

Thus scientific research accumulates testimony to the *Secret Doctrine* teachings. According to that work (I, 262), " . . . every physiological change, in addition to pathological phenomena" is "produced by certain conditions and changes in the tissues of the body which allow and force life to act in that body. . . ." But what produces these "conditions and changes"?

> The physical body of man undergoes a complete change of structure every seven years, and its destruction and preservation are due to the alternate function of the fiery lives as "destroyers" and "builders." They are "builders" by sacrificing themselves in the form of vitality to restrain the destructive influence of the microbes, and, by supplying the microbes with what is necessary, they compel them under that restraint to build up the material body and its cells. They are "destroyers" also when that restraint is removed and the microbes, unsupplied with vital constructive energy, are left to run riot as destructive *agents.* Thus, during the first half of a man's life (the first *five* periods of seven years each) the "fiery lives" are indirectly engaged in the process of building up man's material body; life is on the ascending scale, and the force is used in

construction and increase. After this period is passed the age of retrogression commences, and, the work of the "fiery lives" exhausting their strength, the work of destruction and decrease also commences.

VACCINATION A CAUSE?

Cancer is a degenerative disease which rarely attacks young people. Manifestly, it is the result of some strange, abnormal stimulation of the "destroyers" during the cycle of physical decline. What might contribute to an alteration of the protein elements in the blood, which either causes or is associated with the wild proliferation of ordinary body cells? Perhaps the wholesale vaccination and serumization of the population during recent decades has something to do with it. It is known that foreign proteins injected into the blood can and do "hybridize" with native elements to form new biological entities. Might not the shock of these unnatural invaders reduce the general resistance of the body, open the way to the destroyers? Could not such foreign proteins fecundate normal body cells, which, under conditions of weakened resistance, would eventually multiply and form malignant tumors? This, of course, ignores probable psychic factors.

Meanwhile the depredations of cancer are decreasing the age-limit of immunity. For the years 1900, 1910, 1920 and 1929, the mortality from cancer per 100,000 among persons between the ages of 45 and 54 increased as follows: 139, 168, 174 and 186.

"SPIRIT SURVIVAL"

Cautious science editor of the New York *Herald-Tribune,* John J. O'Neill, reports new evidence "tending to prove communications from beyond the grave." In the issue of July 11 he describes the work of Dr. John F. Thomas, a Detroit school superintendent who has compiled the results of experiments with mediums into a volume of 320 pages, published by the Boston Society for Psychic Research. Containing alleged messages from the spirit of Dr. Thomas's deceased wife, this work is said to demonstrate a "ninety-two and three-tenths probability" of the survival of the spirit after death. The research was carried on at Duke University under the direction of Prof. William McDougall and Dr. J. B. Rhine, and the results have been accepted in partial fulfillment of the requirements for a degree of doctorate in philosophy for Dr. Thomas. One wonders where the philosophy comes in. We quote from the report:

Dr. Thomas bases his conclusions on communications received from mediums during a nine-year period, the data covering 525 records of sittings by "sensitives," as the mediums are called, in the United States, Canada and England. At most of the sittings Dr. Thomas was present, but at others the communications were received by a third party. Of the latter type, many were held in England while he was in this country. None of the mediums lived nearer than 800 miles to his home.

The Accuracy Score

In making his analysis of the communications, Dr. Thomas broke them down to single statements of fact, each of which he called a point, and scored each point for accuracy.

The record contains a total of 1,908 points. Of these, ninety-seven were unverifiable and eighty-nine were inconclusive. The remainder could be verified out of Dr. Thomas's memory or by sending an investigator to ascertain the facts. In this way 1,587 points were verified or 92.3 per cent of the total subject to verification.

Dr. Thomas devotes a chapter to considering the possibilities of the mediums gaining the information by normal or fraudulent means. He divides the subject into four categories, and treats each of eleven sub-groups. His conclusion is that "the fraud explanation, while not theoretically impossible, is fantastically incredible."

Two mathematical treatments of the results were made, one at Duke University and the other by Dr. C. T. Anderson, of the research department of the Detroit Board of Education. According to the Detroit method of calculating, if the results were due to chance—or, in other words, guessing on the part of the mediums—the more than 90 per cent accuracy would be achieved but once out of 250 billion, billion, billion, billion (twenty-five followed by thirty-seven zeros) cases. The Duke calculations make it still less probable that the results were due to chance, or would have such a high percentage of verified statements obtained only once out of 61,000 billion, billion, billion, billion, cases.

By Chance?

To get an idea of what these latter figures mean: If each of the two-billion inhabitants of the earth should make this experiment and the results were due to nothing but chance, and we allow twenty years to a generation, it would require 600,000 billion, billion, billion years for the results in Dr.

Thomas's case to be duplicated. As the earth is not more than three billion years old, it would require a period of time 200,000 billion, billion times the age of the earth for this to happen.

It is Dr. Thomas's implied contention that similar results could be achieved in a vast number of other cases handled in the same careful way, and, therefore, the theory they were due to chance must be eliminated, and that they are due to telepathy, clairvoyance or survival of the spirit after death.

Dr. Thomas does not reject the survival theory. He says in his conclusions, "The survivalist theory covers all the facts, but it is not necessitated by the evidence available in this book, because of the possibility of the alternative extended mind-reading explanation."

He is not satisfied with the ordinary variety of telepathy and clairvoyance as the explanation. He says: "To explain the facts of the records presented in this book, together with those reported by other observers, would call for telepathy and clairvoyance beyond any known experimental limits. It would mean the power to acquire knowledge of facts, past, present or future, physical or mental, by simple exercise of a supernormal faculty."

Twentieth Century Psychism

With this account it becomes evident that the spiritualistic movement of the twentieth century has begun in earnest. The hard shell of scientific scepticism is at last cracked. Men in prominent positions no longer risk their reputation and career by taking an interest in such matters. Moreover, when university men write seriously on the subject, and are assisted by the educational research staff of a large metropolitan city, we may be sure that the cycle of psychism in this century will vary considerably from that of the last, in both character and dimension. The movement known as modern spiritualism is considered to have begun in 1848, some eighty-nine years ago. While records of similar occurrences extend throughout all history, this year is distinguished by the fact that it marked a starting point of interest, experiment and speculation that spread and grew with amazing rapidity. Alfred Russell Wallace has noted that while first interest in the subject was aroused by the phenomena which occurred in the vicinity of the Fox sisters, of Hydeville, New York, "at the same time other mediums were discovered in different parts of the country, *as if a special development of this abnormal power were then occurring.*" These included Andrew Jackson Davis, a shoemaker's apprentice at Poughkeepsie, New York, and the Davenport Brothers. D. D. Home, subse-

quently famous, had his first psychic vision about 1846 as a boy of thirteen.

The Fifth Element?

What precipitated this "special development"? According to H.P.B., "a *partial* familiarity with the characteristic of matter —permeability—which should be developed concurrently with the sixth sense, may be expected to develop at the proper period in this Round." (*S. D.* I, 258.) If such development is under cyclic law, and if cyclic action may be expressed as successive waves, perhaps the middle of the last century marked one of a series of manifestations indicating a cumulative change in the psychic principles of the earth, and of all beings upon it. H.P.B. wrote further that the fifth, semi-material Element, Ether, "will become visible in the air towards the end of our Fourth Round, to reign supreme over the others during the whole of the Fifth," and that "we shall transmit Ether (or rather the gross subdivision of it) in its fulness to the Sixth Root Race." (*S. D.* I, 12, 342.) Place beside this an apposite statement by Mr. Judge, and we have much to ponder on. In his article, "Rounds and Races," he says:

> This fifth sub-race [of the fifth root race] is said to be preparing in America for transition or transformation into the sixth sub-race; it is not entirely clear whether we in the United States today belong to the seventh family-race of the fifth sub-race, or to the first family-race of the sixth sub-race. It seems certain that we are near the transition point, unless there must be an intervening pralayic period.

Protecting Unbelief

Considering the great overlapping of the Races, and the correspondences between sub and root races, we need have little wonder at the emerging psychic powers of the last century. Nor should those longing for the enlightenment of humanity regret that the interest in preternatural phenomena suffered an eclipse during the early decades of this century. It is perhaps a great blessing that the subject of organic evolution and other questions of a purely physical character have so engrossed the minds of scientists as to preclude curiosity hunting in the great unknown of psychic research. Even now, the painstaking and tedious methods of science which so prolong the announcements of conclusions that are self-evident to men of ordinary common sense may be serving the useful end of holding back a mighty tide of "psychic" Karma. In this sense we may

regard the incredulous materialists as unwitting "saviors" of the great mass of "believers" who would become mediums and psychic dabblers at a mere word from almighty Science.

Between now and 1975 the present generation will witness the balancing of the moral ledger of the Theosophical Society; see thousands go down to moral degradation, victims to forces against which only Theosophy can warn, but for whom its voice has been rendered ineffective by prevailing misconceptions as to *what Theosophy teaches.* In recent years there has been some talk and some honest effort among various Theosophical bodies toward the promulgation of "straight Theosophy." This should mean to spread broadcast the teachings of H. P. Blavatsky and William Q. Judge, unadorned—*unadulterated.* It has nothing to do with a striving for "personal" development; the only development theosophists need to concern themselves with is that which will make them the better able to help and teach others. And the first step is *study* of the writings of H.P.B. and W.Q.J.

Telepathy Among Birds

Thought-transference offers an explanation of the highly developed communal activities of birds, according to Robert S. Woods of Azusa, Cal. (Los Angeles *Times,* July 18.) He suggests that the teamwork exemplified by a flock of geese or ducks on the wing may indicate a "common mind that is vastly superior to that of any individual." Some sort of telepathy may account for the ability of young birds to travel alone ahead of their parents to their winter range, states Mr. Woods. The fact that distance has no effect upon this type of communication supports the telepathy theory. Similar thoughts on this subject are presented by Richard Perry in an English publication, *The Contemporary Review* (December, 1936).

> It is generally realized [he writes] that the animal creation possesses certain senses that man has lost in the process of evolution. The best-known example is the hyperaccurate power of orientation of most animals: supreme in the migrating bird, that returns year after year, several thousand miles to the very tree in which it had nested the previous year; and especially in those birds . . . such as the young cuckoos, that set out from the British Isles, many weeks after the adults, on a southerly voyage over unknown territories to their winter home in Africa.

Our Laggard Intellects

Having observed the mass instinct of several species of birds and animals, the writer concludes that mental telepathy alone offers a

full explanation of the perfect symmetry and geometrical design of a swarm of bees, a flock of starlings or a flight of wild ducks. He suggests that birds are endowed with more delicate instincts than man and that this extreme sensitiveness takes the form of communal thought in the instance of the flock and individual telepathy in the case of the parent and offspring. Comparing the bird kingdom to man, Mr. Perry notes that "advantages we have gained by the development of reasoning powers have frequently been nullified by the necessity of having to think before we perform some act that should be instinctive, and is so to the less intelligent but more natural birds and beasts."

"Class Consciousness"

Theosophy teaches that intelligence in the lower kingdoms is of a general or class order; that consciousness being *hierarchical* rather than individual as in man. Another illustration of this type of intelligence is given by Dr. M. W. de Laubenfals, Carnegie Institution biologist, who has been experimenting with common sponges (Los Angeles *Times,* Dec. 27, 1936.) He cut a living sponge into small pieces and strained the fragments through a silk bag. The result was most remarkable:

> After a time, the cells, like a regiment of soldiers falling into line at the call of a bugle, started to reform the original sponge. It was only a few days that the sponge fragments lived as separate cells before getting together again. The sponge animal is so tough that it may be torn apart, cell by cell, yet not be killed.

Such evidence points out that the astral pattern of the sponge is not destroyed by the dismembering of an individual of the species—no more than does the dispersal of a flock of birds destroy their "flock" instincts. Individuality in the lower kingdoms is an illusion of the physical plane—the temporary embodiment of class consciousness. These scientific studies reveal the basic process of all evolution as a permanent intelligence working through changing forms, or reincarnation.

Psycho-Surgery

The case of an unsuccessful Chicago stockbroker who became a millionaire after an operation on the cerebral centers of his brain is reported by Dr. Ward C. Halstead, University of Chicago neurologist. (New York *Times,* June 11.) Dr. Halstead heralds the change in the patient as showing the miraculous results available through this new "surgery of the soul." Mental tests taken for

two years following the operation indicate that the man now has greater persistence, greater optimism and self-confidence. He exhibits freedom from his former tendency to worry, and has become an "ideal" business man with marked ability enabling him to amass his present fortune. There were, however, various "other effects." The patient showed a "marked deterioration of the intellectual functions, *particularly in the function of discrimination.*" Dr. Halstead reports that a "residual defect was noted, particularly in the so-called higher processes."

Damage or destruction of the physical seat of the power of imagination, which admittedly inhibits the faculty of discrimination, can only quicken and enthrone the animal man. Such operations destroy the natural agents through which the highest powers of the soul function on this plane. From "loss of discrimination," in the words of *The Bhagavad-Gita,* comes "loss of all."

"SUCCESSFUL ANIMALS"

Raymond Pearl, philosopher-biologist, expresses concern for the future of humanity. (New York *Herald-Tribune,* July 18.) Surveying human progress, he finds it seriously lacking in the qualities most needed for survival. Regarding man's intellectual development as an evolutionary step unparalleled in biological history, he recognizes that great danger lies in his failure to balance this increased power of mind with other qualities. He says:

> The additions to man's biological potentialities have had the effect of increasing his superiority as an animal to all other animals that have appeared. But nothing has been added to those qualities that differentiate him from all other animals and make him a man—his mental, moral and spiritual attributes. We have today no wiser men than Aristotle, none more learned than Scaliger and none so holy as Jesus or Buddha.

Why Dr. Pearl should call for "further cultivation and development of biology, and particularly human biology," is something of a mystery. Perhaps it is because he is a biologist. One might think that if we desire to become Buddha-like men, the natural course would be to study the ideas that led to Buddha's development. We may, however, be grateful for Dr. Pearl's admission of the incompetence of present biological knowledge to solve our problems. He has found, like Prof. H. Hawkins, that "there is no doubt of man's ability to become the most successful type of animal that has ever existed, but the reward of success in that direction is death."